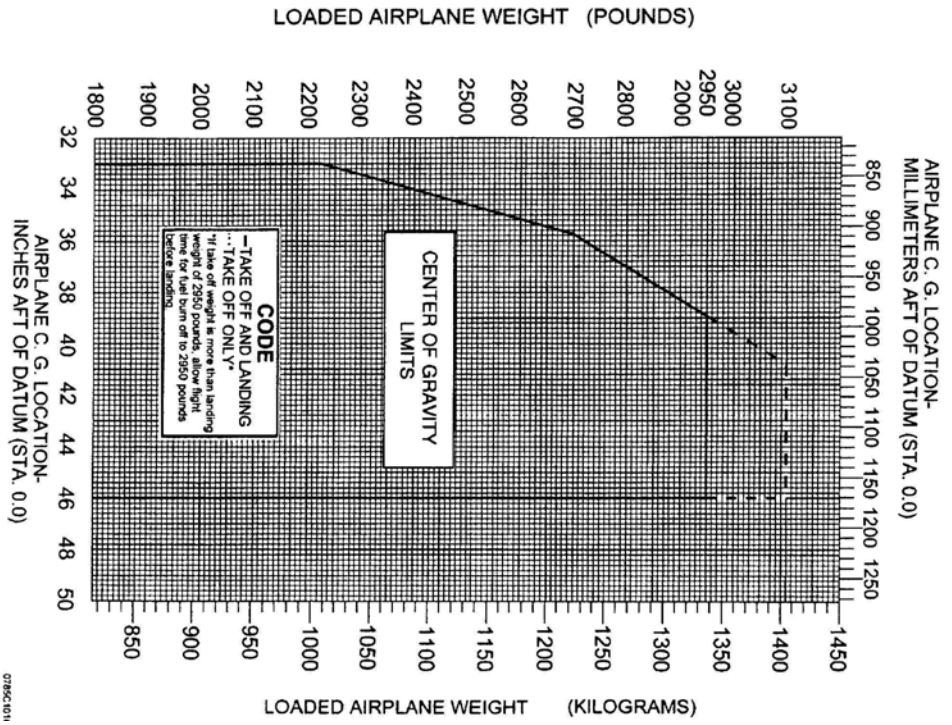
# WEIGHT AND BALANCE / TOLD
# C-182T

| | | | |
|---|---|---|---|
| C-182T | N- | | |
| DATE: | | SORTIE # | |
| PIC: | | | |

| | WEIGHT (LBS) | ARM (IN) | MOMENT (IN/LBS) |
|---|---|---|---|
| AIRCRAFT BASIC EMPTY WEIGHT | | | |
| USABLE FUEL (PICK ONLY ONE, FULL OR TABS) | + | X 46.5 | + |
| FULL: 87 GAL X 6 LBS/GAL | | | |
| TABS: 64 GAL X 6 LBS/GAL | | | |
| PILOT AND COPILOT | + | X 37.0 | + |
| REAR PASSENGERS | + | X 74.0 | + |
| BAGGAGE AREA A (120 LBS MAX) | + | X 97.0 | + |
| BAGGAGE AREA B (80 LBS MAX) | + | X 116.0 | + |
| BAGGAGE AREA C (80 LBS MAX) | + | X 129.0 | + |
| START, TAXI, RUNUP FUEL | -10.0 | X 46.5 | -465 |
| TAKEOFF WEIGHT / CG / MOMENT | | | |
| MISSION FUEL (14 GAL X 6 LBS X #HRS) | - | X 46.5 | - |
| LANDING WEIGHT / CG / MOMENT | | | |

CG (IN) = SUM OF MOMENTS / SUM OF WEIGHTS

WRITE TAKEOFF AND LANDING CG IN ARM COLUMN ABOVE, MARK ON DIAGRAM BELOW



## SHORT FIELD TAKEOFF DISTANCE AT 3100 POUNDS

CONDITIONS:

Flaps 20°
2400 RPM, Full Throttle and Mixture Set Prior to Brake Release
Cowl Flaps Open
Paved, Level, Dry Runway
Zero Wind
Lift Off: 49 KIAS
Speed at 50 Ft: 58 KIAS

| Press Alt In Feet | 0°C | | 10°C | | 20°C | | 30°C | | 40°C | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Grnd Roll Ft | Total Ft To Clear 50 Ft Obst | Grnd Roll Ft | Total Ft To Clear 50 Ft Obst | Grnd Roll Ft | Total Ft To Clear 50 Ft Obst | Grnd Roll Ft | Total Ft To Clear 50 Ft Obst | Grnd Roll Ft | Total Ft To Clear 50 Ft Obst |
| S. L. | 715 | 1365 | 765 | 1460 | 825 | 1570 | 885 | 1680 | 945 | 1800 |
| 1000 | 775 | 1490 | 835 | 1600 | 900 | 1720 | 965 | 1845 | 1030 | 1980 |
| 2000 | 850 | 1635 | 915 | 1760 | 980 | 1890 | 1055 | 2035 | 1130 | 2190 |
| 3000 | 925 | 1800 | 995 | 1940 | 1070 | 2090 | 1150 | 2255 | 1235 | 2435 |
| 4000 | 1015 | 1990 | 1090 | 2150 | 1175 | 2325 | 1260 | 2515 | 1355 | 2720 |
| 5000 | 1110 | 2210 | 1195 | 2395 | 1290 | 2595 | 1385 | 2820 | 1485 | 3070 |
| 6000 | 1220 | 2470 | 1315 | 2690 | 1415 | 2930 | 1520 | 3200 | 1635 | 3510 |
| 7000 | 1340 | 2785 | 1445 | 3045 | 1560 | 3345 | 1675 | 3685 | --- | --- |
| 8000 | 1480 | 3175 | 1595 | 3500 | 1720 | 3880 | --- | --- | --- | --- |

**NOTES:**

1. Short field technique as specified in Section 4.
2. Prior to takeoff, the mixture should be leaned to the Maximum Power Fuel Flow placard value in a full throttle, static runup.
3. Decrease distances 10% for each 9 knots headwind. For operation with tail winds up to 10 knots, increase distances by 10% for each 2 knots.
4. For operation on dry, grass runway, increase distances by 15% of the "ground roll" figure.

Figure 5-6. Short Field Takeoff Distance (Sheet 1 of 3)



## SHORT FIELD LANDING DISTANCE AT 2950 POUNDS

CONDITIONS:

Flaps FULL
Power Off
Maximum Braking
Paved, level, dry runway
Zero Wind
Speed at 50 Ft: 60 KIAS

| Press Alt In Feet | 0°C | | 10°C | | 20°C | | 30°C | | 40°C | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Grnd Roll Ft | Total Ft To Clear 50 Ft Obst | Grnd Roll Ft | Total Ft To Clear 50 Ft Obst | Grnd Roll Ft | Total Ft To Clear 50 Ft Obst | Grnd Roll Ft | Total Ft To Clear 50 Ft Obst | Grnd Roll Ft | Total Ft To Clear 50 Ft Obst |
| S. L. | 560 | 1300 | 580 | 1335 | 600 | 1365 | 620 | 1400 | 640 | 1435 |
| 1000 | 580 | 1265 | 600 | 1365 | 620 | 1400 | 645 | 1440 | 665 | 1475 |
| 2000 | 600 | 1370 | 625 | 1405 | 645 | 1440 | 670 | 1480 | 690 | 1515 |
| 3000 | 625 | 1410 | 645 | 1445 | 670 | 1485 | 695 | 1525 | 715 | 1560 |
| 4000 | 650 | 1450 | 670 | 1485 | 695 | 1525 | 720 | 1565 | 740 | 1600 |
| 5000 | 670 | 1485 | 695 | 1525 | 720 | 1565 | 745 | 1610 | 770 | 1650 |
| 6000 | 700 | 1530 | 725 | 1575 | 750 | 1615 | 775 | 1660 | 800 | 1700 |
| 7000 | 725 | 1575 | 750 | 1615 | 780 | 1665 | 805 | 1710 | 830 | 1750 |
| 8000 | 755 | 1625 | 780 | 1655 | 810 | 1715 | 835 | 1760 | 865 | 1805 |

NOTES:

1. Short field technique as specified in Section 4.
2. Decrease distances 10% for each 9 knots headwind. For operation with tail winds up to 10 knots, increase distances by 10% for each 2 knots.
3. For operation on dry, grass runway, increase distances by 45% of the "ground roll" figure.
4. If a landing with flaps up is necessary, increase the approach speed by 10 KIAS and allow for 40% longer distances.

Figure 5-12. Short Field Landing Distance